## REMARKS

Claims 1-10 are currently pending in the application. By the foregoing, claims 1, 3-5, 8, and 9 have been amended and claim 10 has been added. No new matter has been introduced and all amended and added claims find support in the originally filed specification.

In the Action, it was indicated that the German Examination Report, dated April 10, 2001, submitted with the IDS filed with the original application, appeared incomplete. According to Applicant's records, a complete copy was filed; however, for the Examiner's convenience an additional copy of the Examination Report is enclosed.

In the Action, claims 1-9 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Amendments were made to claims 1, 3-5, 8 and 9 such that they conform to U.S. practice and for consistency of the claim terms. However, the scope of claim 1 and the remaining amended claims have not been narrowed in any aspect.

With regard to any confusion regarding the use of subscripts or reference notation in the claims, Applicant respectfully refers the Examiner to paragraphs [0053], [0064] and [0065] of the original specification which provide clear descriptions of the relevant "pH" notation. Specifically, the subscript numbers in the pH values (i.e., 1, 2, 3, 4) refer to separate measurement times. The subscript

"+" or "=" indications refer to the charge of the applied voltage. The ΔpH numbers (i.e., 21, 43) refer to a delta value from the measurements taken. See paragraph [0053]. Further, a typographical error concerning notation in claim 1, paragraph (b) was corrected (one instance of "$pH_{-3}$" was replaced with --$pH_{+3}$--). This amendment is clearly supported by the above-referenced paragraphs in the original application.

Applicant respectfully submits that all of the pending claims are now in accordance with the requirements of §112, second paragraph. Accordingly, Applicant respectfully requests withdrawal of the §112 rejection.

In the Action, claims 1-9 were rejected under 35 U.S.C. §102(b) as being anticipated by EP 0 870 823 (Zen). Applicant respectfully traverses this rejection.

Claims 1-9 were also rejected under 35 U.S.C. §102(b) as being anticipated by *Biosensors and Bioelectronics 15* (Lehmann et al.). Applicant respectfully traverses this rejection.

Claim 1 recites a process that includes applying a voltage to a culture medium so that hydroxyl or hydrogen ions are formed from the substance in the culture medium. Claim 1 further recites measuring at least a first measurement value prior to or during the application of the voltage and measuring at least a second measurement value upon switching off or changing the voltage. The process of claim 1 also includes repeating the above and calculating a difference between

the first measurement (pH) values and second measurement (pH) values to produce measurement value differences (ΔpH).

Both Zen and Lehmann et al. fail to suggest or disclose the above claimed process. Specifically, Zen and Lehmann et al. fail to disclose applying a voltage to a culture medium so that hydroxyl or hydrogen ions are formed; and prior to or during the application of the voltage, measuring a first measurement (pH) value; and upon switching off or changing the voltage taking a second measurement (pH) value.

The cited references do not suggest or disclose applying a voltage to a culture medium for obtaining first and second pH values. The references only describe devices for measuring pH-value in a substance, wherein a change of pH-value in said substance results from biocompartments, but not from *applying* electric potentials to the substance.

In the Zen patent, column 2, line 37, an ISFET sensor 58 is disclosed as producing an electrical signal *in response* to detected hydrogen ion concentration. Zen does not disclose using a voltage to produce such concentration. Further, while measurement of pH through the use of ISFETs is disclosed in Lehmann et al., there is no disclosure of applying a voltage as recited in claim 1.

In view of the foregoing, Applicant respectfully submits that claim 1 is patentable over the cited references. Claims 2-9 depend from claim 1 and are

therefore also patentable over the cited references. Accordingly, Applicant respectfully requests withdrawal of the Section 102 rejections. Reconsideration of claims 1-9 and allowance of pending claims 1-10 is respectfully requested.

If for any reason the Examiner believes that an interview, either telephonically or in person, would advance prosecution of the application, the Examiner is respectfully requested to contact the undersigned to arrange an interview.

Respectfully submitted,

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